X-RAY HIGH FREQUENCY APPARATUS AND ACCESSORIES

CATALOG

PART V.—No. 6

NEW YORK
104 East 23d Street
125 West 42nd Street
650 Madison Avenue
MINNEAPOLIS
604 Nicollet Avenue
ST. PAUL
358-360 St. Peter Street
FACTORY
Cor. 31st St. and First Ave.
PARIS
3 Rue Scribe

E. B. Meyrowitz

OPHTHALMOLOGICAL, ELECTRO-MEDICAL AND X-RAY APPARATUS, HIGH GRADE EYE, EAR, NOSE AND THROAT INSTRUMENTS

104 EAST TWENTY-THIRD STREET, NEW YORK
TWO DOORS EAST OF FOURTH AVE. TELEPHONE CONNECTIONS AT ALL STORES

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SALESROOMS
104 EAST 23rd ST.
M'F'R'S OF X-RAY & ELECTRO-
THERAPEUTICAL APPLIANCES

TERMS.

AS OUR CATALOG is circulated freely and may reach the hands of intending purchasers, with whom we have had no previous dealings, it is requested that orders be accompanied by the amount called for in this price list.

NEW ACCOUNTS.—Customers who desire to open accounts are requested to furnish satisfactory business references. We ship no goods to parties unknown to us, and a compliance with the above rule will save delay in filling orders.

C. O. D. SHIPMENTS.—If goods are to be sent C. O. D. an amount sufficient to cover all express charges should accompany order.

REMITTANCES.—To avoid risk we prefer remittances by express, money order, draft on New York, registered letter or postal money order.

BREAKAGE.—We employ only experienced packers, who, under our own supervision, pack goods with the utmost care; therefore we cannot be held responsible for breakage in transportation.

COMMISSION ORDERS.—We can only accept orders for goods not made or carried in stock by us with the understanding that such orders will be filled to the best of our ability, that the goods cannot be returned, and that the prices which we are obliged to charge cannot be altered.

☞ DO NOT MUTILATE THIS CATALOGUE BY SENDING US CLIPPINGS. ..... EVERY ARTICLE IS NUMBERED, AND A SIMPLE REFERENCE TO THE PAGE OR NUMBER WILL ANSWER THE SAME PURPOSE.....

INTRODUCTORY NOTE

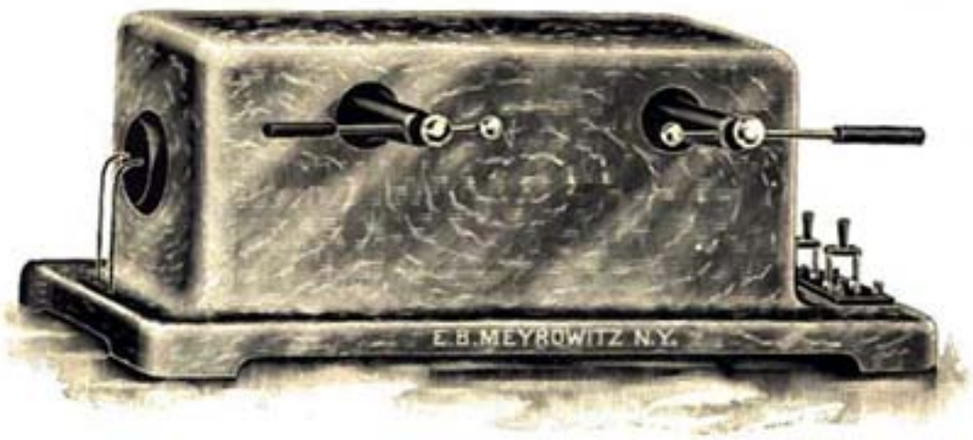
IMPORTANT

In order to condense our price list and present as little reading matter as possible to those who wish to use our catalogue mainly as a purchasing guide, we have published a glossary or index which not only describes the articles herein represented, but brings out in an unbiased statement the objectionable as well as the good features of every standard method of construction.

X-Ray and High Frequency work is becoming of such great importance that every physician, surgeon and dentist should know more of, not only the practical use, but of the details in construction of the apparatus which he is to handle. It is of absolute importance that the operator make a study of the different parts of an outfit so that he will know precisely what he has to deal with before purchasing.

We would therefore recommend that you familiarize yourself with the terms and methods described in the glossary, and let us know at the same time the class of work which you are doing, so that we may furnish you with literature from time to time upon the subjects that you will be most interested in. With our extensive manufacturing facilities at home in constant co-operation with our European agents, we are in a position to keep ourselves posted on the products of the world in the electrical branch as well as the other departments of our work.

X-Ray Coils



E 2500

(PATENT APPLIED FOR.)

As the efficiency and durability of X-Ray coils depend entirely upon the amount of care bestowed upon their construction and the use of proper insulating materials, intending purchasers should receive some valid assurance that the apparatus under consideration is not deficient in these all important features.

Carefully conducted experiments and tests by eminent electrical authorities made with a view of determining the relative insulating qualities of the materials employed in the construction of X-Ray coils have developed the fact that sufficient care has not been taken in insulating X-Ray coils for the service which is ordinarily required of them, and that the burning out of the secondaries is only too frequently due to change or inefficiency of the insulating material used.

Profiting by these tests and aided by our long experience in the manufacture of Electrical Apparatus, we have not only taken special care to employ the best grade of insulating materials, but have also by close study and observation been enabled to devise a casing of new and improved construction by means of which it is possible to keep the apparatus absolutely clean and remove all dust or dampness which are apt to accumulate upon the casing and thus prevent any deterioration of the insulating material and consequent "break down" of the coil itself.

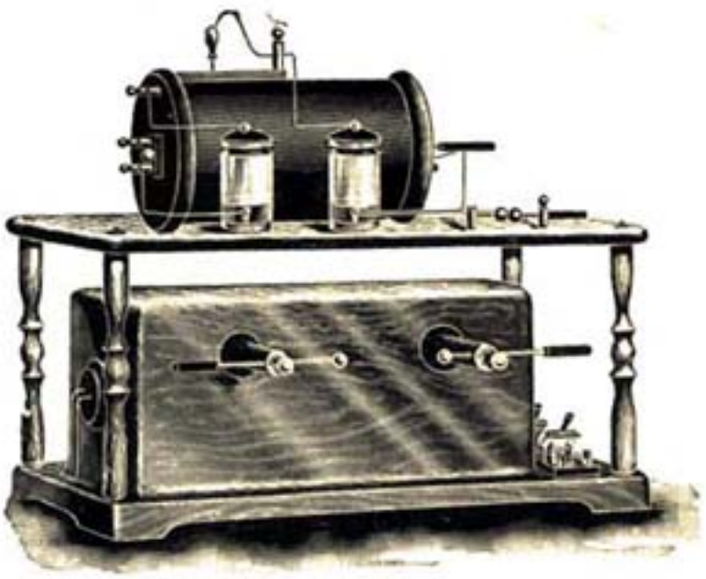
As regards the cost, we wish to say only that price-competition has been ignored wherever it would compel a departure from the highest standard of construction. We affirm positively, however, that lower prices than we quote are not to be secured without the sacrifice of quality, both in material and workmanship.

Price of coils mounted in oak or mahogany for the 110, 220 volt, direct current, or 104 volt alternating, as follows:

4 inch	$80.00
6 "	90.00
8 "	110.00
10 "	140.00
12 "	160.00
14 "	180.00
16 "	220.00
18 "	260.00
20 "	300.00

Larger sizes to order.

X-Ray Coil with High Frequency Attachment



E 2501

Operators requiring nothing except coil and high frequency attachment will find the style represented above very convenient and satisfactory. The resonator mounted over coil makes the most compact arrangement that it is possible to obtain, as certain spacings are necessary when combining the two. Having the discharge rods on the coil extend laterally from coil cabinet permits us to mount the high frequency attachment very much lower than can be done otherwise, and not only brings the attachment to a more accessible height, but precludes all chance for short circuits and enhances the appearance of the outfit.

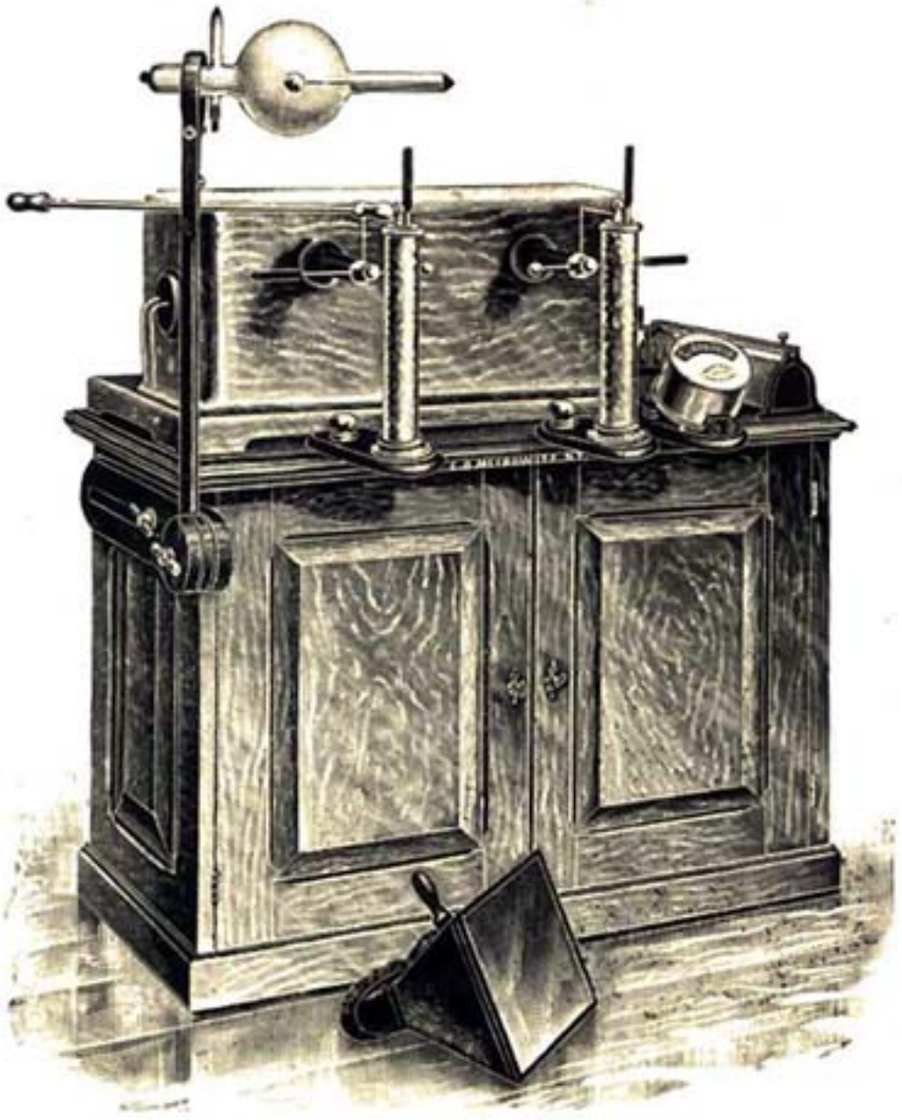
The 6-inch and 8-inch sizes are specially desirable for nose and throat specialists.

Prices of coil and resonator as above in oak or mahogany for the 110 or 220 volt direct current, or the 104 volt alternating, are as follows:

4 inch coil	$120.00
6 " "	130.00
8 " "	150.00

For larger sizes add $50.00 to prices quoted on page 5.

X-Ray Apparatus



E 2510

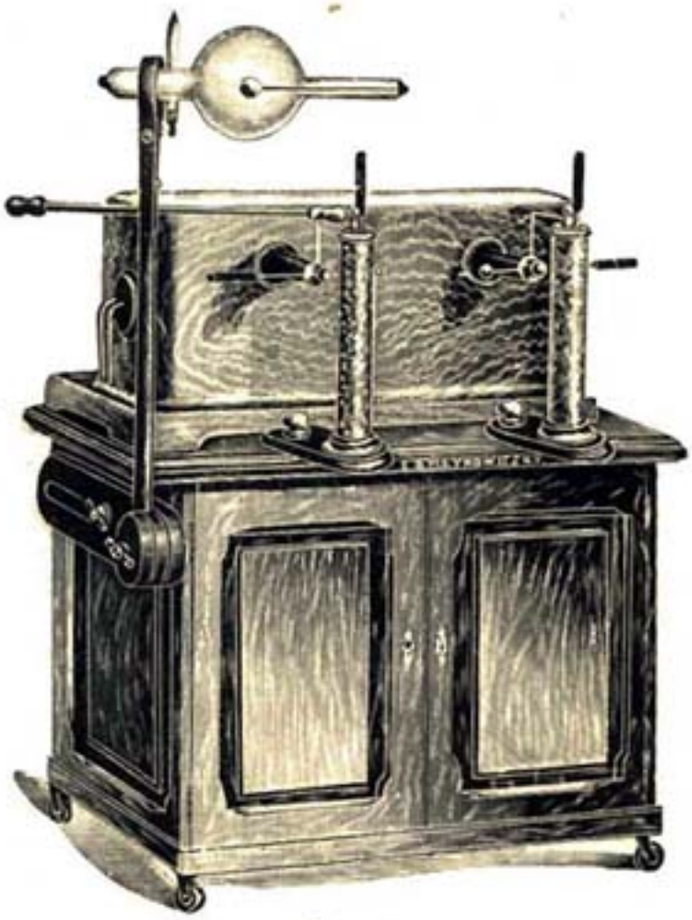
The above cut illustrates our coil outfit without resonator. These we make regularly in four sizes, 10 in., 12 in., 14 in. and 16 in. Other sizes to order.

We find that any of the above sizes will do the very best X-ray work that can be done with any apparatus, no matter what the size may be. The difference in these lies in the fact that the larger sizes will handle tubes of greater range in vacuum, while with the smaller coils a certain vacuum must be maintained to do the best work.

Coil.	Tube stand.	2 Electrolytic Interrupters.
Cabinet.	2 X-Ray tubes.	Complete set of Blue Prints
Rheostat.	8"x10" Platino-Barium Cyanide	and full instructions for
Spark gaps.	Fluoroscope.	setting up outfit.

10 inch.....$320.00; 12 inch.....$360.00; 14 inch.....$400.00; 16 inch.....$440.00

Ward Outfit



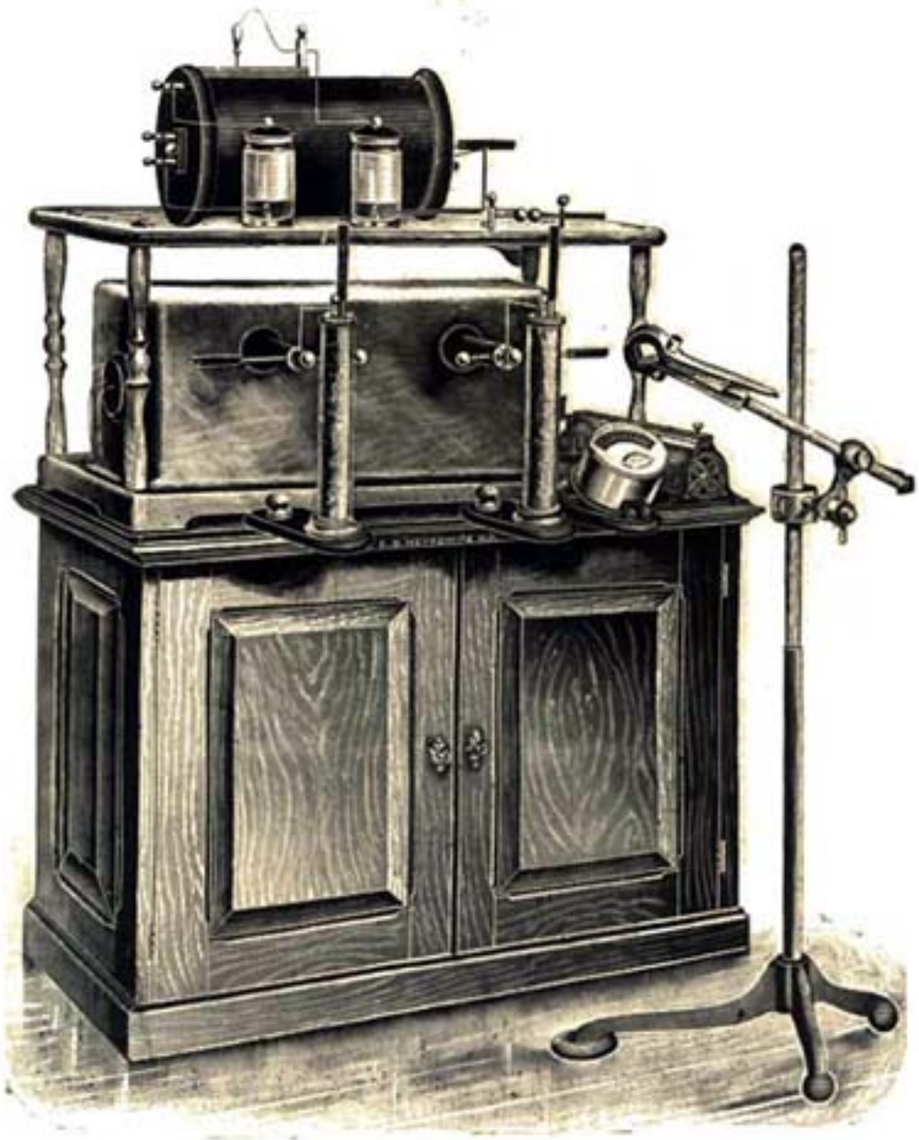
E 2511

Apparatus as represented above we style as our Ward Outfit owing to the readiness in which it can be moved about. As it is mounted on four-inch rubber-tired castors, it is especially convenient in hospitals for bed-side treatment by the X-Ray or high frequency current. Where space is limited in a physician's office, this type of apparatus is also recommended.

For prices without the high frequency attachment, add $5.00 to quotations found on page 7.

Providing the high frequency attachment is required, add $5.00 to prices found on page 9.

Complete Outfit with Resonator



This cut represents one of our X-ray outfits with Oudin resonator mounted above coil, making a compact and convenient apparatus to handle. By simply carrying a set of wires to the coil the resonator is ready for use.

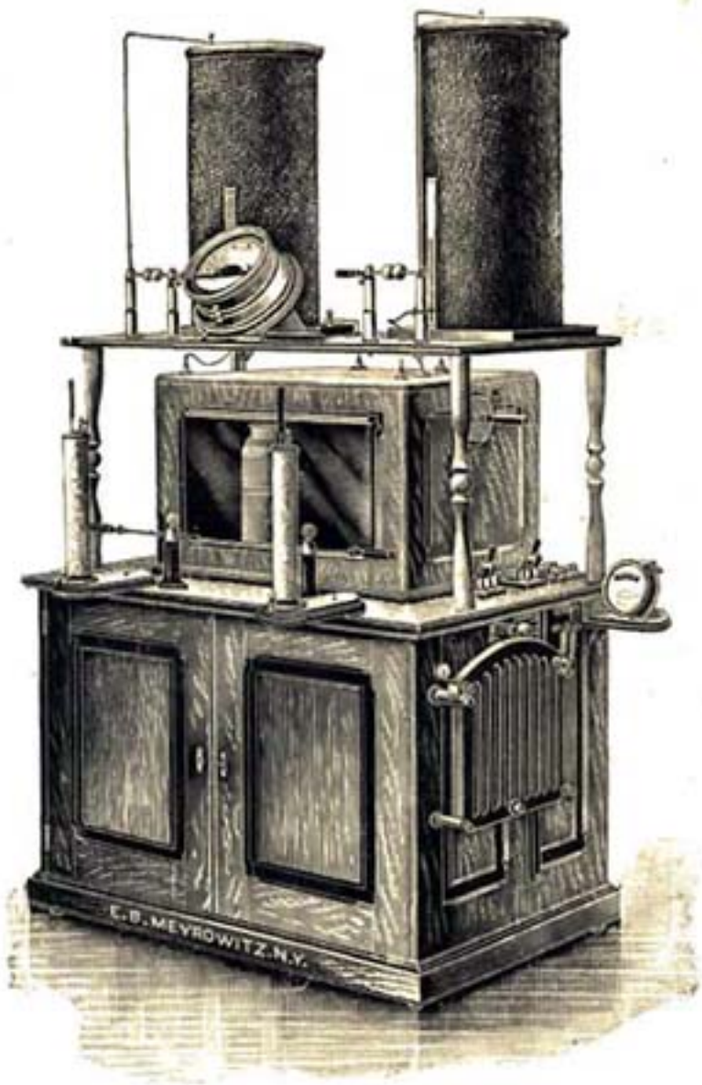
E 2520

Price complete, including:

Coil.
Cabinet.
Rheostat.
Spark gaps.
Tube stand.
2 X-Ray tubes.
2 Electrolytic Interrupters.
1 Platino-Barium Cyanide Fluoroscope.
1 Oudin High Frequency Resonator mounted above Coil.
1 Set of three vacuum electrodes.
1 Handle for same.
Complete set of Blue Prints and full instructions for installing apparatus.

10 inch.....$355.00; 12 inch.....$395.00; 14 inch.....$435.00; 16 inch.....$475.00

Other sizes to order.



E 2525

The apparatus illustrated above was designed and constructed for the New York Throat, Nose and Lung Hospital. It has two resonators and is so arranged that two patients can be treated at one time by the auto-condensation or auto-conduction methods. It is also possible, of course, to treat with the bipolar method from both resonators.

The coil in this outfit is placed in the rear and lower part of the cabinet, so as to allow sufficient immunity from the condensor and resonator.

This apparatus is equipped with three interrupters, an ammeter for measuring the current passing through primary of coil, and also a hot-wire milammeter for registering the quantity of high potential current passing from resonator to patient.

A further description will be given upon application.

All sizes of coils from 8 inch to 20 inch can be used with this apparatus, for the 110 or 220 volt direct current or 104 volt alternating current.

Price complete with accessories, as itemized on page 9, together with an additional interrupter, ammeter and milammeter:

8 inch coil	$380.00	16 inch coil	$540.00
10 " "	420.00	18 " "	580.00
12 " "	460.00	20 " "	620.00
14 " "	500.00		

Ammeters and Voltmeters

E 2550

We are prepared to furnish standard volt and ammeters for all classes of work connected with X-ray and high frequency apparatus. They are all mounted upon finely-finished black bases and supported on brackets at an angle of 45 degrees, so that they can be easily read from the natural standing position of the operator.

The ammeter, especially, is of great value, as the operator can be guided with it in adjusting his interrupters.

Price of ammeter reading from 0—25 ..... $18.50
" " " " " 0—50 ..... 18.75
Price of voltmeter reading from 0—130 ..... 20.00
" " " " " 0—250 ..... 23.00

E 2565

Milammeters are now being constructed both for measuring the current passing through an X-Ray tube and also for determining the volume of high frequency current delivered to a patient under treatment.

Price of meter reading from 0—10 ..... $30.00
" " " " " 0—24 ..... 35.00
" " " " " 0—200 ..... 25.00
" " " " " 0—800 ..... 25.00
" " " " " 0—1800 ..... 28.00
" " " having two readings with shunt plug 0—200 and 0—800. ..... 40.00

Electrolytic Interrupters

E 2600

WEHNELT

The Wehnelt interrupter is one of the well-known "breaks" for X-Ray coils, especially in skiagraphy and fluoroscopy. The electrolyte is placed in a porcelain jar, while this is in turn suspended in a large tank filled with water. This arrangement not only makes a very quiet interrupter, but one which will remain cool for a long time.

Price, complete, with blue print and instructions for installing..... $30.00

CALDWELL

E 2601

The Caldwell interrupter is well adapted to the operating of high frequency apparatus and treatment work with X-Rays, and especially serviceable on the 220-volt direct current.

Price with water-cooling tank..... $15.00
Price in extra large tank for continuous service 20.00

Mechanical Interrupters

INDEPENDENT VIBRATOR

The independent vibrator which we manufacture is especially serviceable on portable apparatus and for battery coils. It is constructed on the plan of the double magnetic pole German "break," and has several superior features. It is self-starting, does not get over-heated, and is so well balanced that it gives a continuous steady light in the tube.

Price without condensor.....$25.00
Price with mica condensor..... 70.00

NOTE.—We manufacture both mica and paper condensors but recommend those made of mica. With our cheaper coils we send out paper condensors, while we always furnish the former with our higher priced outfits.

MERCURY INTERRUPTER

We illustrate here one of the most reliable Mercury breaks on the market. It is constructed on the turbine principle and is arranged so that the alternating effect can be produced when the high frequency attachment is being used. This is considered by some of greater value than the directional oscillatory high potential current.

We also use this interrupter in connection with a synchronous motor for use on the alternating current. With the adjusting device which we include with the instrument the operator is able to catch both alternations at the highest voltage, thus securing double the efficiency from his apparatus. Where the current is broken at each period only, there is a marked loss in efficiency, and this is obviated in our construction. We recommend this interrupter where apparatus is to be in use for protracted periods.

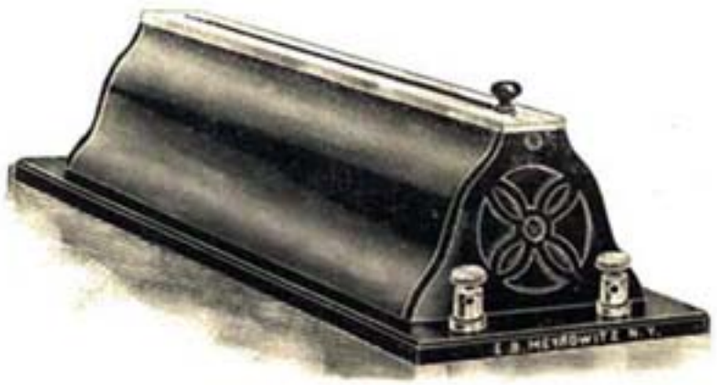
E. 2607

With D. C. motor (without condensor).....$65.00
Motor and interrupter arranged for the alternating effect (without condensor)..... 75.00

These interrupters require condensors of from 2½ to 5 micro-farads, according to coil upon which they are to be operated.

Price of paper condensor.....$15.00 to $30.00
Price of mica condensor..... 30.00 to 60.00

Coil Rheostats



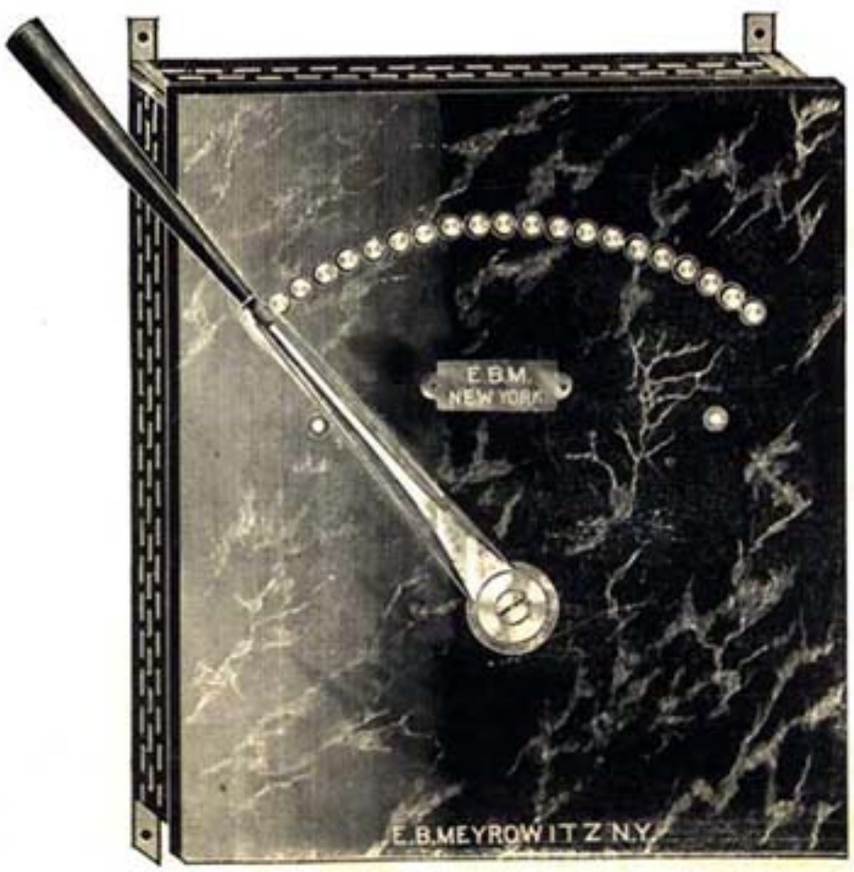
E 2610

Although we manufacture other styles of coil rheostats, we illustrate one which requires small space and is very convenient. It is as reliable as any on the market.

Price.....$20.00
Size of base 6½x19 ins.

Coil Rheostat

(WITH LONG LEVER)



E 2612

Coil rheostats should be constructed so that comparatively large currents can be carried for long periods of time, as it is always necessary to place a small amount of resistance in the circuit of an X-Ray coil.

Accompanying cut illustrates our rheostat for this purpose, and is made entirely of metal porcelain and asbestos.

We guarantee it for the severest service, and will add that it presents a fine appearance when mounted upon the end of the coil cabinet or adjacent wall.

Price for the 104 or 110 volt currents.....$35.00
Price for the 208 or 220 volt currents..... 40.00

Switchboards for X-Ray Apparatus

E 2615

We believe we were the first to manufacture commercial current switch boards in this country for electro-therapeutists, and we are well equipped to furnish anything in this line meeting competition in price when quality is considered.

The cut represents one style of switch board which is very popular and consists of Ammeter, Voltmeter, ruby lamp, fuse cut-out, coil rheostat and controller mounted upon a finely-finished slate base.

The inner construction is covered by perforated steel strips finished in oxidized copper.

As in our E 2612, we use nothing but metal, porcelain and asbestos in their construction.

Price (size of base 24x30 inches) . . $150.00

Multiple Spark Gap

E 2617

It is very convenient and sometimes necessary to place resistance in the circuit between the coil and X-Ray tube. As the only resistance available for high potential currents such as is generated from the secondary of a large coil, is a series of air gaps, attachments known as "*multiple spark gaps*," are placed in the circuit. Raising the rod, thus increasing the number of air spaces, has the effect of cutting down the secondary current. When using an X-Ray tube which has comparatively low vacuum, the penetrating power of said tube can be very much increased by the use of these gaps.

Operators, after having used them a short time, would scarcely know how to adjust a coil for an X-Ray tube without them.

Price per set with glass tube. $10.00
" " " " mica " 18.00

Tube Stand

A convenient, very strong and easily manipulated tube stand, having a perfectly rigid holder (an essential feature for skiagraphs), and a form of weighted tripod to prevent toppling when a heavy protecting hood or any excessive weight is attached to the holder.

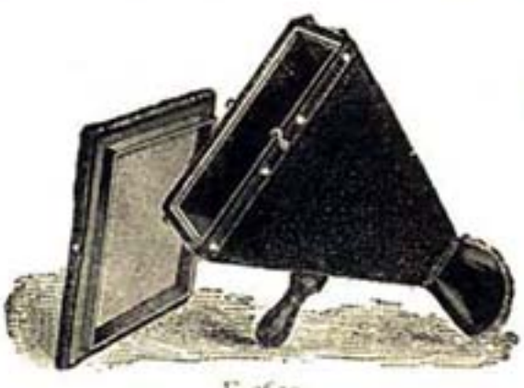
The holder proper not only has a screw clamp, but also a spring which holds the jaws together while the clamp is being adjusted. The holder also has a suspending rod (shown in E 2510), which is used to support the cords running from the coil to the tube, preventing punctures and keeping the wires properly separated.

Price $12.00

E 2620

Fluoroscopes

We can furnish any grade or style of fluoroscope, but we have regularly in stock only those with screens of the very finest quality of Platino-Cyanide of Barium. On short notice we can furnish screens of Tungstate of Calcium or any grade of screen of the Platino-Cyanide of Barium.



E 2630

Price of fluoroscope with detachable screen:

5x7	$12.00
6x8	16.00
7x9	20.00
8x10	24.00

Screens of Platino-Cyanide of Barium..25c. per sq. in.
Screens of the Tungstate of Calcium.. 13c. per sq.

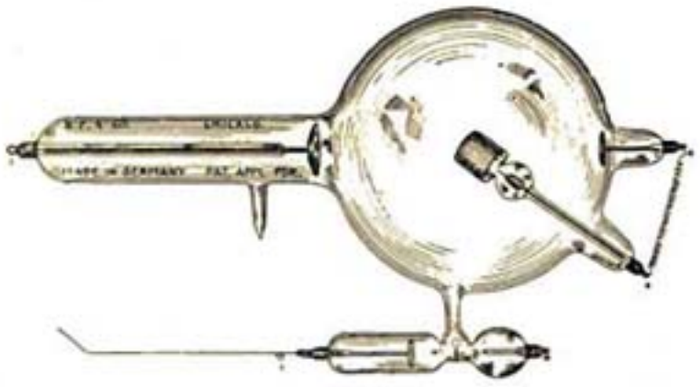
X-Ray Tubes

The Gundelach X-Ray tube has no doubt the best record for rapid picture work of any tube made. The vacuum regulator consists of a platinum tube fused into the larger of the two extensions. By removing the glass cap and heating this tube to a cherry red, air is allowed to enter through the pores of the metal itself, thus lowering the vacuum.

E 2640

Prices as follows:

25-30-cm.,	4¾	in. bulb	$17.00
40-50 "	5½	"	19.00
60-70 "	6¼	"	23.75
80-90 "	7¾	"	32.00



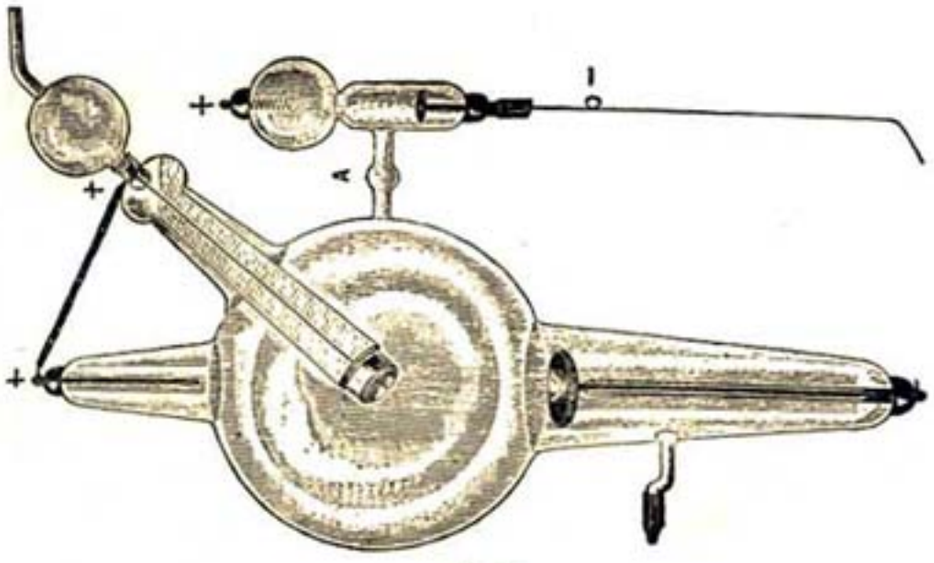
E 2650

Heavy anode X-Ray tube with raising and automatic lowering device.

Price:

35-40 cm.,	5	in. bulb	$22.00
50-60 "	7	"	26.00
70-80 "	8	"	30.00

Water cooling X-Ray tube with raising and automatic lowering device. Both our E 2650 and this tube are especially suitable for coil work in treating and fluoroscopy.

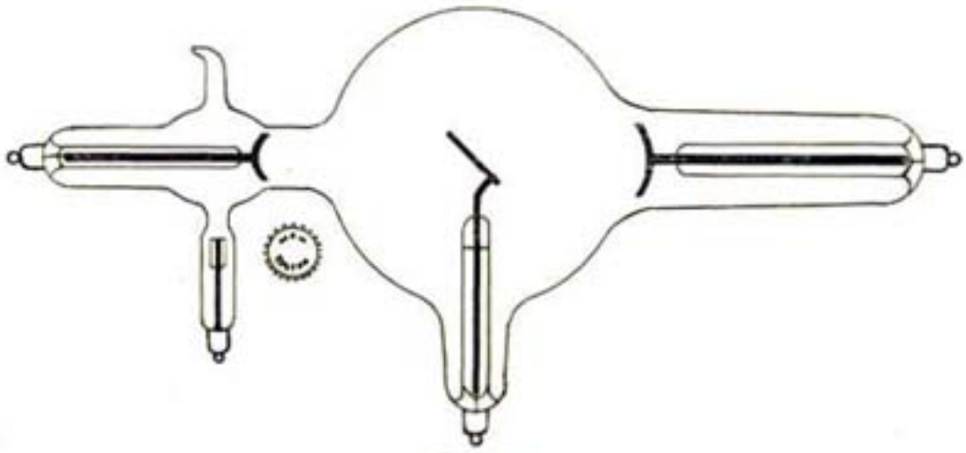


E 2660

Price:

80 cm., 7 in. bulb $40.00

Double Cathode Tube



E 2665

The double cathode X-Ray tube is intended for use on the alternating current, as it acts somewhat as a rectifier. When the wave from this current is passing through the tube in the right direction, the effect is to make a perfect cathode stream between the larger cathode and the target, but when the opposite conditions prevail the tube is thrown out of focus and the rays absorbed. The connections are made at the terminals of each cup electrode.

Price, 5 inches in diameter..... $14.00
" 6 " " " 16.00

Treatment X-Ray Tube

Caldwell Localizing X-Ray tube for coil work.

The most satisfactory localizing tube made, as the X-Rays are projected directly at the end of the extended tube.

Bulb four inches in diameter.

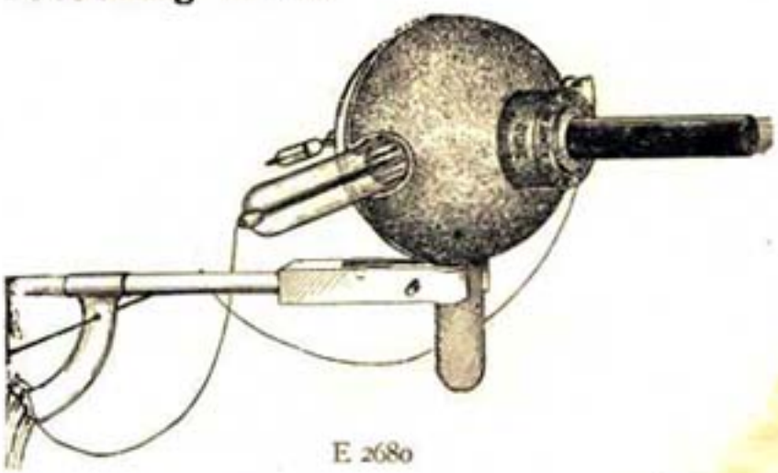
E 2670

Price..... $12.50

Protecting Hood

This hood is made of a material which is opaque to the X-Rays and forms a hemisphere sufficiently large to receive any of our 35 to 50 cm. tubes. With the hood we supply a set of hard rubber extension tubes in three sizes for the treatment of corresponding sized areas.

When ordering, please state size and make of X-Ray tube to be fitted.



E 2680

Price..... $12.00

E. B. MEYROWITZ, NEW YORK

High Frequency Currents

It has been demonstrated to the satisfaction of conservative Electro-therapeutists that the current from an induction coil passed through properly constructed solenoids, resonators and condensors has a marked effect upon vaso-motor, motor and sensory nerves, the sympathetic nervous system and micro-organisms. From the reports of many practitioners it would seem that in this type of current we have the most versatile and effective remedy known for the treatment of acute and chronic conditions. The most convincing evidence of the efficacy of the so-called high frequency current is contained in reports from physicians who were at first extremely skeptical.

It is a well established fact, however, that currents of very high frequency, such as are obtained from the static machine, produce transient effects, while low frequencies obtained from Faradic instruments, unless very carefully handled, are too energetic and powerful, and in a large proportion of cases produce over-stimulation and nerve exhaustion.

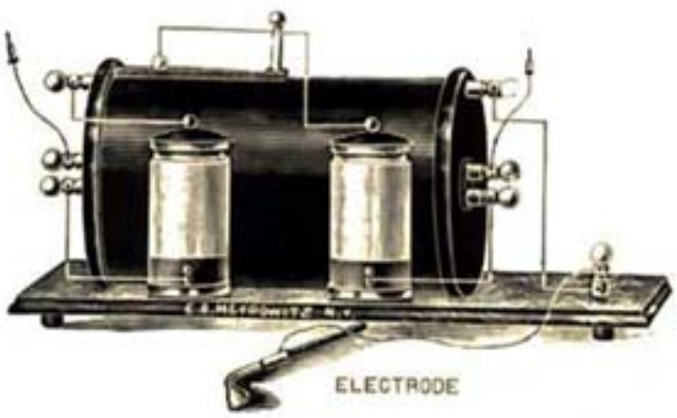
A properly constructed high frequency apparatus produces a current, the reaction of which upon the circulatory, muscular, and sympathetic system, has a very favorable effect. Some of the conditions which have been so successfully handled are: Gout, rhematoid, arthritis, diabetes, Bright's disease, anal fissures, metritis, nervous dyspepsia, constipation, renal insufficiency, hepatic torpor, rheumatic deformans, gonorrhea, epididymitis, prostatitis, eczema, psoriasis, locomotor ataxia, paresis, mastoiditis, anemia, leukemia, nerve exhaustion, septicemia and ovaritis.

The high frequency current is not a panacea for all ailments, but in cases where there is an unbalanced condition in the circulation, or lack of tone, either general or local, results have been obtained that certainly justify the physician in giving it a thorough trial. From present indications we are led to believe that the time is not far distant when most physicians will have at their disposal an apparatus for the generation of this current.

The electrodes which may be used in connection with this type of apparatus are numerous, but applications are usually made with vacuum tubes shaped to suit the part under treatment, or with the regular static roller or ball. This work can be done with only one wire connected to the apparatus, but two may be used if a stronger current is required.

It should be understood that not all machines or devices for producing a glow or luminous effect in the ordinary vacuum electrode should be called high frequency attachments. An apparatus for producing the best effects must consist of a primary solenoid in connection with condensors. With this arrangement both the number of frequencies and strength of current are under perfect control, which is not the case with many other instruments intended for the same purpose.

Oudin Resonator



E 2800

This resonator is constructed after the Oudin pattern. It is without doubt the best of all accessories made for the production of the so-called high frequency current.

We can furnish the single resonator for unipolar, or the double for bipolar work. It should be stated that a single resonator can be used for bipolar current; but with two in series having opposite polarity a much more powerful discharge can be obtained.

Price, including three vacuum electrodes with handle, one metal ball electrode and cords:

E 2800 { Single Resonator, dimensions 8x12 inches $50.00
{ Double " " " " 75.00

Any three electrodes from E 2900 to E 2940 may be selected. Unless otherwise stated we include one Vaginal, one Rectal and one Universal or spray; also one metal ball electrode.

We make these resonators in two sizes, viz.:

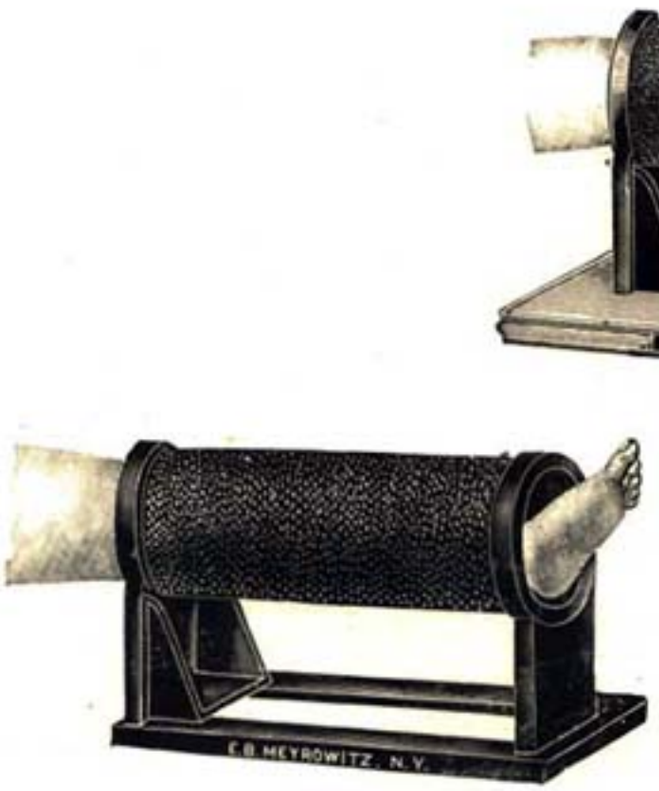
8x12 and 11x18 inches.

The former are intended for nose and throat specialists when used in connection with small coils.

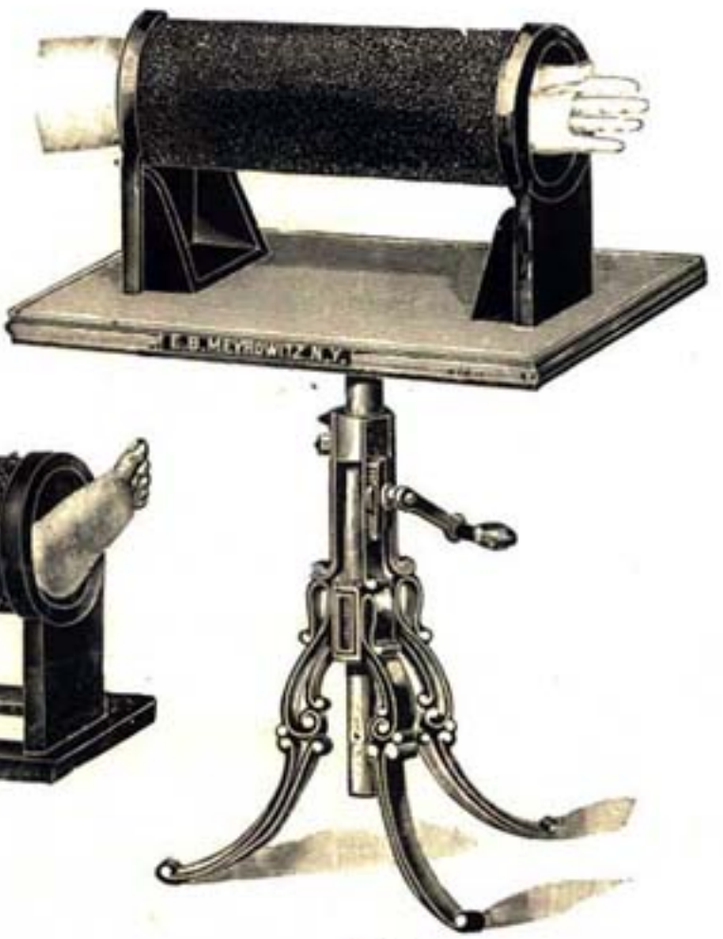
The latter for general practice. Although of larger dimensions they have a long range of regulation so that the very smallest vacuum electrode can be used on the most delicate mucous surfaces, or an effluve 3 to 4 inches long can be obtained.

E 2805 { Single Resonator, dimensions 11x18 inches $60.00
{ Double " " " " 85.00

Arm and Leg Solenoids



E 2855



E 2850

In the treatment of rheumatism and other diseases affecting the arm and leg it is found that one of the best remedies is the high frequency current administered by the auto-conduction method. The above cuts represent attachments for this purpose. They can be furnished with or without the adjustable stand.

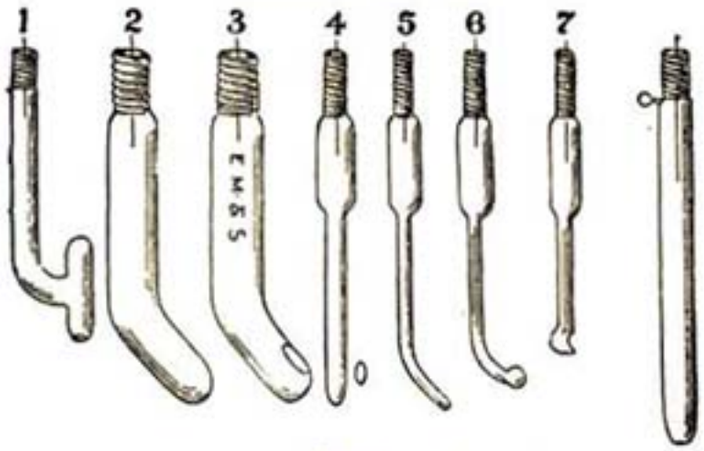
This stand is arranged so that the Solenoid can be raised and lowered as desired by a crank motion which will bring the apparatus on a level with a chair or can be raised a convenient height for a comfortable position in treating the arm.

Price of	E 2850	Arm	Solenoid without	stand $25.00
" "	E 2855	Leg	" "	" 25.00
" "	E 2860	Arm	" with	" 35.00
" "	E 2865	Leg	" "	" 35.00

Vacuum Electrodes for High Potential and High Frequency Currents

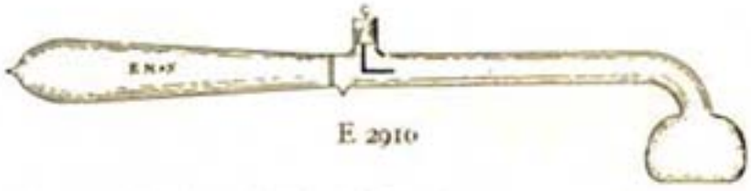
High Frequency Electrodes with Fused-In Wire

Patented July 1899



E 2900

Set of 7 including handle	$8.50
Set of 5 including handle	7.00
Tubes separate	1.25
Handles separate	1.25



E 2910

Electrode for surface application with fused-in wire $2.00

E 2920

Rectal electrode with fused-in wire $1.50

E 2930

Price, each $1.50

These electrodes are manufactured in three styles, viz., with fused-in wires, without internal wires, and with internal current conductors for local work. Electrodes E 2900, E 2910 and E 2920 are of the first, while E 2940 and 2970 are of the second type. E 2930 is a cut of the rectal electrode of the third type and has a small glass tube through the center connecting the ends, so that the discharge from the resonator can be concentrated at the extremity.

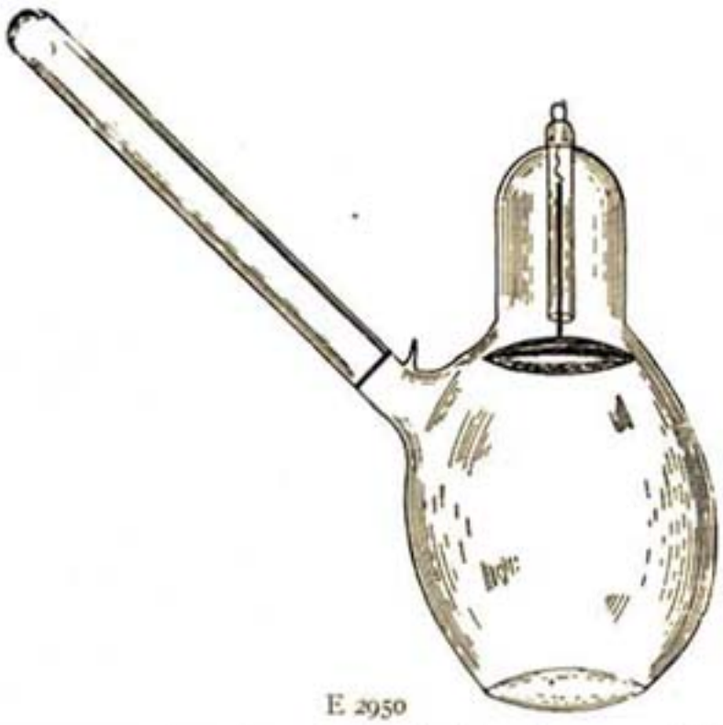
We can furnish these electrodes in any form or shape desired.

High Frequency Electrodes

Special set of Vacuum Electrodes designed by Dr. W. B. Snow:

E 2940

Set packed in box..... $5.00
Tubes separate ..... .75
Handle separate ..... .75

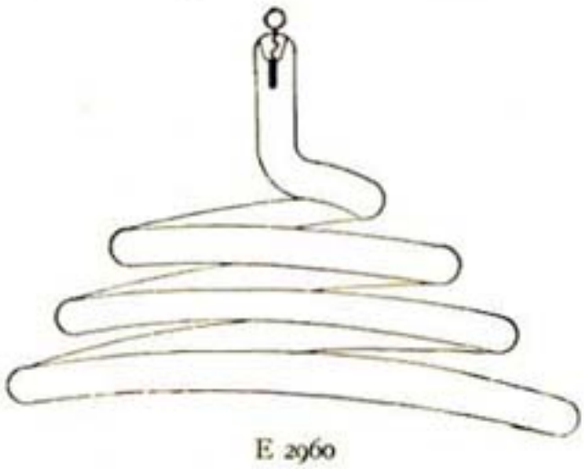


E 2950

Above cut represents our vacuum electrode for obtaining heavy so-called high frequency discharges. A great deal is now being done in the treatment of tubercular cases with oscillatory currents, and some wonderful results are being obtained. This electrode is especially adapted to this class of work.

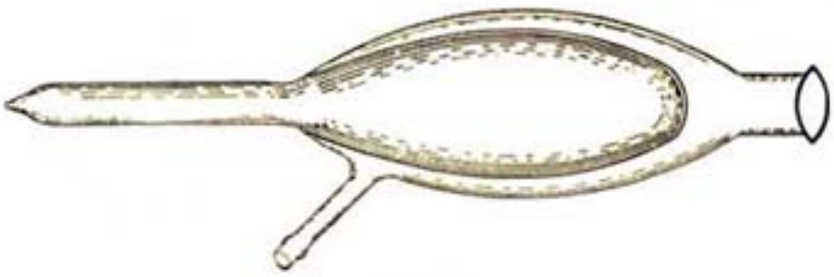
For Heavy Discharge, flat bottom..... $4.00
The same, round bottom..... 4.00

High Frequency Electrodes



E 2960

Crown Electrode for head breeze..... $6.00



E 2970

We believe that the Hughes Ionizer is a very valuable electrode for superozonizing and oxidizing oils and other medicaments used for nose and throat sprays. It is very highly endorsed and we feel justified in recommending it for treatment of catarrhal and other diseases of the respiratory tract.

Price..... $4.00

Cords for X-Ray and High Frequency Attachments

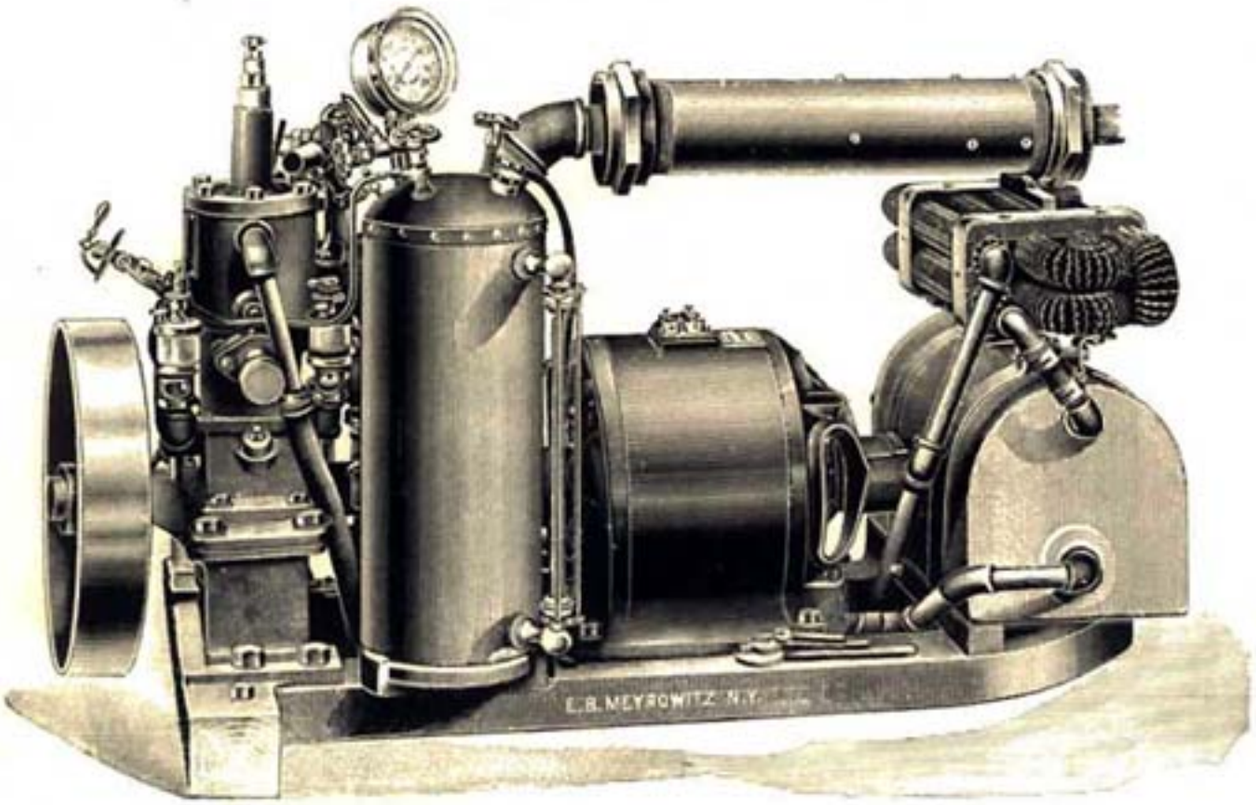
E 2975

The cord which we furnish is rubber covered and enclosed in nicely braided red and blue silk. The hooks are specially made for this class of work and do not become detached.

Price per pair 5½ ft. long..... $1.25
" " " 6½ " " 1.50
" " " 7½ " " 2.00
Hooks separate, per pair..... .20

Motor-Generators

Direct Current Generating Outfit



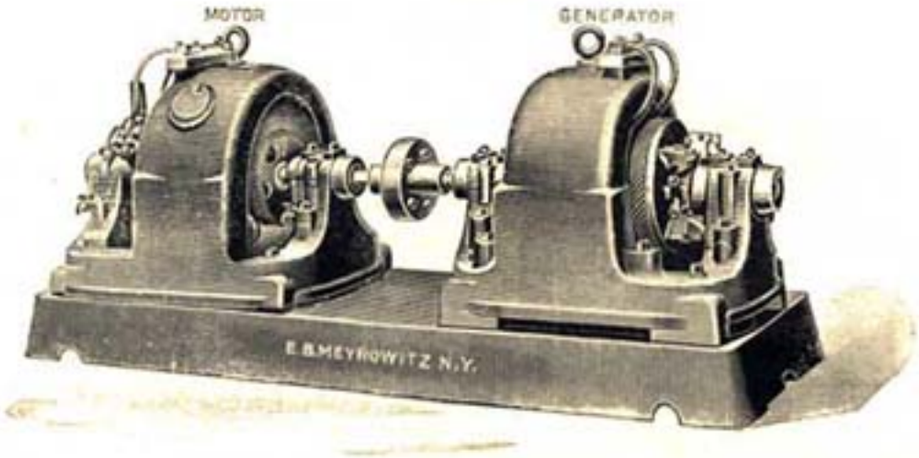
E 5200

Where it is not convenient or possible to obtain the commercial electric current, a motor-generator outfit operated with ordinary kerosene oil, as shown in the above cut, should be employed. It makes not only the most economical but the safest power that can be developed.

We can furnish complete installations for hospitals, sanitariums or for the physician's office, in sizes ranging from .9 K.W. to 30 K.W. output (16 to 600 16-c.-p. lamp capacity).

Prices of these outfits with estimated cost of installations furnished upon request.

Alternating to Direct Current Outfit



E 5250

As the 110-volt direct current is the ideal current for nearly all classes of work which would interest the physician, we have introduced our Alternating Current to Direct Current outfit shown above.

Price with	2	H. P	Motor	.9	K. W.	Generator.	60 Cycle		$300.00
" "	3	"	"	1.8	"	"	104 Volts		375.00
" "	4	"	"	2.2	"	"	One Phase		450.00
" "	2	"	"	.9	"	"	60 Cycle		325.00
" "	3	"	"	1.8	"	"	208 Volts		400.00
" "	4	"	"	2.2	"	"	One Phase		475.00
" "	2	"	"	.9	"	"	133 Cycle		375.00
" "	3	"	"	1.8	"	"	104 Volts		425.00
" "	4	"	"	2.2	"	"	One Phase		500.00

For currents of other frequencies prices of apparatus will not exceed those listed under the 133 cycle rates. We can furnish Motor-generator apparatus for the following alternating currents: 25, 30, 40, 50 and 75 cycle in one, two or three phase.

500 Volt to 110 Volt Direct Current Generator

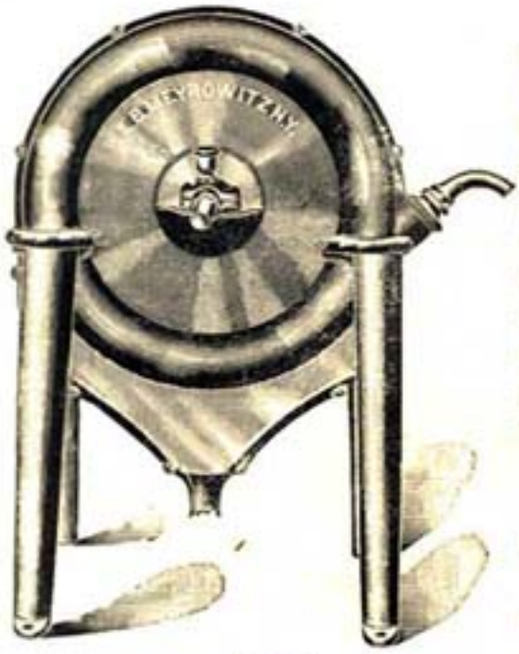
It is often convenient to connect with the trolley circuit of 500 volt direct current, or in some cities this voltage is used for power service. Cut illustrates our Motor - Generator for changing this current to that of 110 volt.

E 5300

The feature of superiority over other makes is the way in which the two machines are combined. It is a well-known fact that the voltage of the trolley current often varies from 450 to 600, and as the field windings of the Generator are connected directly with the line a more uniform output is the result.

Price of	apparatus	with	an	output	of	550	watts	.....	$200
" "	"	"	"	"	"	1100	"	.....	300
" "	"	"	"	"	"	2200	"	.....	380

Water Motors



E 5350

Where a continuous pressure of at least 45 lbs. can be taken from the water mains in sufficient quantity it is often convenient to use this in preference to other power for obtaining electric current to operate static machines or generators for coil apparatus. One of two methods can be adopted where coil apparatus is to be used—one is charging storage batteries for this purpose, the other is generating sufficient current for direct connection. When the former system is to be used a much smaller generating outfit will suffice, and consequently less water supply is necessary; therefore, we will quote on two sizes.

See further description in *Glossary*.

Price of ¼ h. p. water motor requiring a minimum pressure of 45 lbs..... $40.00

Price of 3 h. p. water motor requiring same pressure $125.00

Storage Battery

Although storage cells require more or less attention, it is often necesssary to use them in connection with X-Ray apparatus. If, however, they receive proper care, they are often found very convenient for portable work, and we recommend them in these cases.

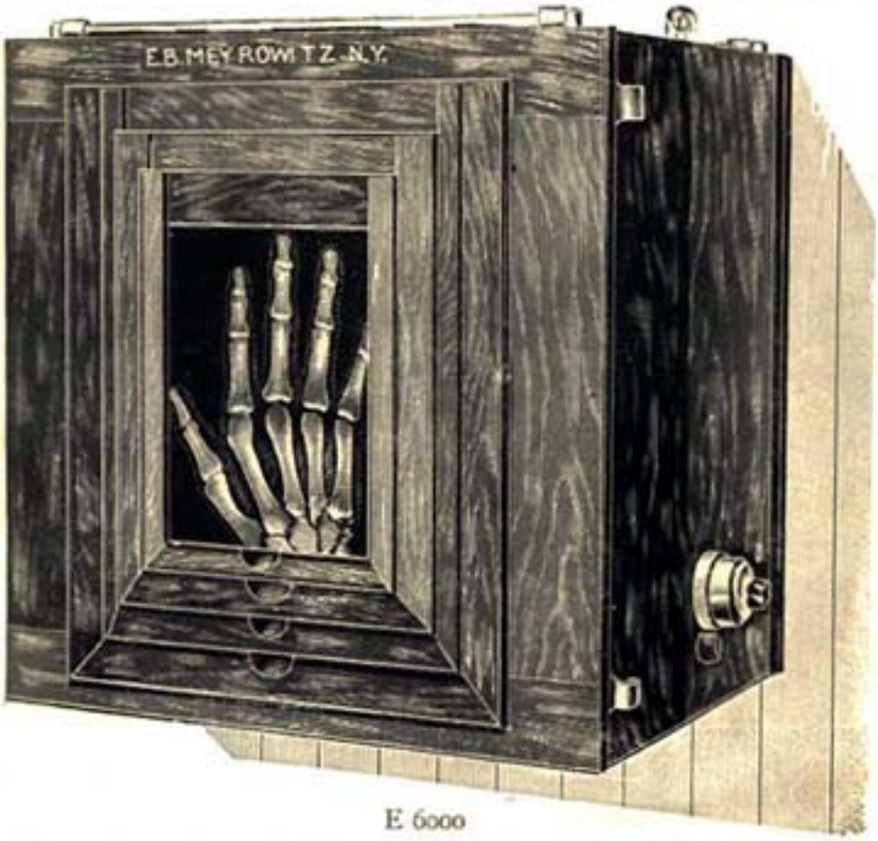
Where the operator has at command a sufficient quantity of water to operate a ¼ or ½ h. p. water motor, a small generator can be attached and a set of storage cells kept charged from this source.

20 ampere hour cells in celluloid each.....$10.00
40 " " " " " " 14.50

We also furnish storage batteries in glass jars for stationary work. Prices on application.

E 5500

Skiagraphic Accessories



E 6000

Illuminating Box

The illuminating box is indispensable to the skiagrapher. Better results can be obtained from reading the negative than making a print, and can be done very much quicker, as the steps taken in printing, developing and toning not only require a great deal of time, but much is lost unless sufficient care is taken in this work. Within thirty minutes after a plate is exposed the operator can diagnose the condition, providing he is in possession of a good illuminating outfit. Placing a plate up to a window is not satisfactory, as it requires the proper amount of subdued light to bring out the fine detail, and this light must be confined back of the plate under examination.

Price without dimming rheostat for plates of five different sizes from 5" x 7" to 11" x 14"..$25.00
Same with dimming rheostat..... 30.00
Larger sizes to order.

Lead Lined Box

A lead-lined box for preserving sensitized X-Ray plates is so convenient that very few operators feel that they can be without one. It not only saves unnecessary steps, but precludes all liability of damaging important work from carelessness, as without one it necessitates placing the plates a long distance from the apparatus to positively prevent their being fogged while the tube is being operated. It is well understood that X-Ray plates must be kept some distance from the apparatus unless they are carefully protected from the X-Ray light by means of some heavy metal or other material which is absolutely opaque to these rays. The box illustrated above is for this purpose, and is a most valuable accessory to an equipment.

E 6050

Price of box sufficiently large to receive plates up to 11" x 14" in size.....$15.00
" " " " " " " " " 14" x 17" " 18.00
These cases are all made of oak and finely finished.

Caldwell Ruby Lamp

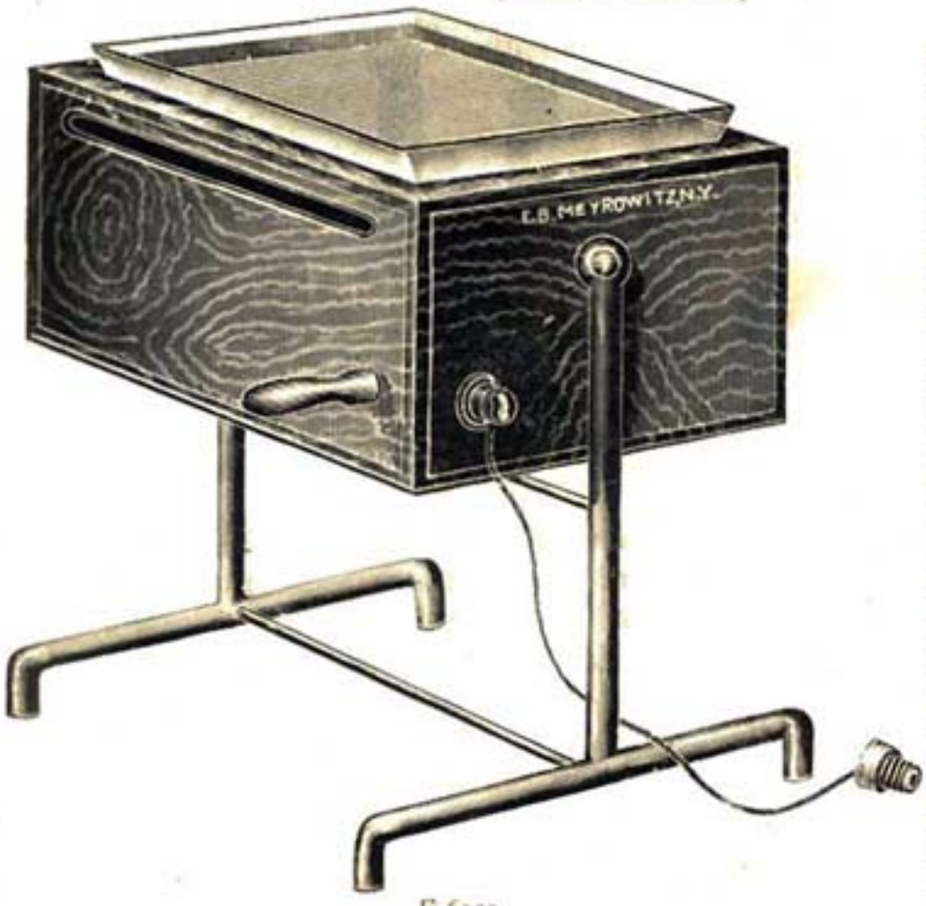
The accompanying cut illustrates a very desirable accessory to the dark-room equipment in the shape of a ruby lamp box. As it is very necessary to use a subdued light occasionally in examining an X-Ray plate during the process of developing, at the same time exposing it to as little light as possible, this lamp is so arranged that it can be thrown to one side or tilted to any position desired. The case is also supplied with a switch, by means of which the light can be turned on or off at will without leaving the table.

Price, complete.....$18.00

E 6100

Developing and Illuminating Table

(Patents Pending.)



E 6150

For convenience and accuracy in developing an X-Ray plate our patent developing table is superior to anything on the market. It combines both developing rocker and illuminating box, and arranged with ruby electric lamps, together with plates of orange glass immediately under tray, so that at any time during the process of developing the plate may be examined under the most favorable conditions without removing or disturbing it in any way. As it is best to admit as little light as possible, a snap switch is provided so that the light may be turned off at will.

These developing rockers are made to be operated by electric, foot or hand power, latter being shown in above cut.

Price for rocker to be operated by hand power $35.00
" " " " " " " foot " 45.00
" " " " " " " electric motor power, D. C., 110 volts.... 60.00

Above rockers are for plates 11" x 14" or smaller.
Larger sizes to order.
If dimming rheostat is required, add $10.00 to the above prices.

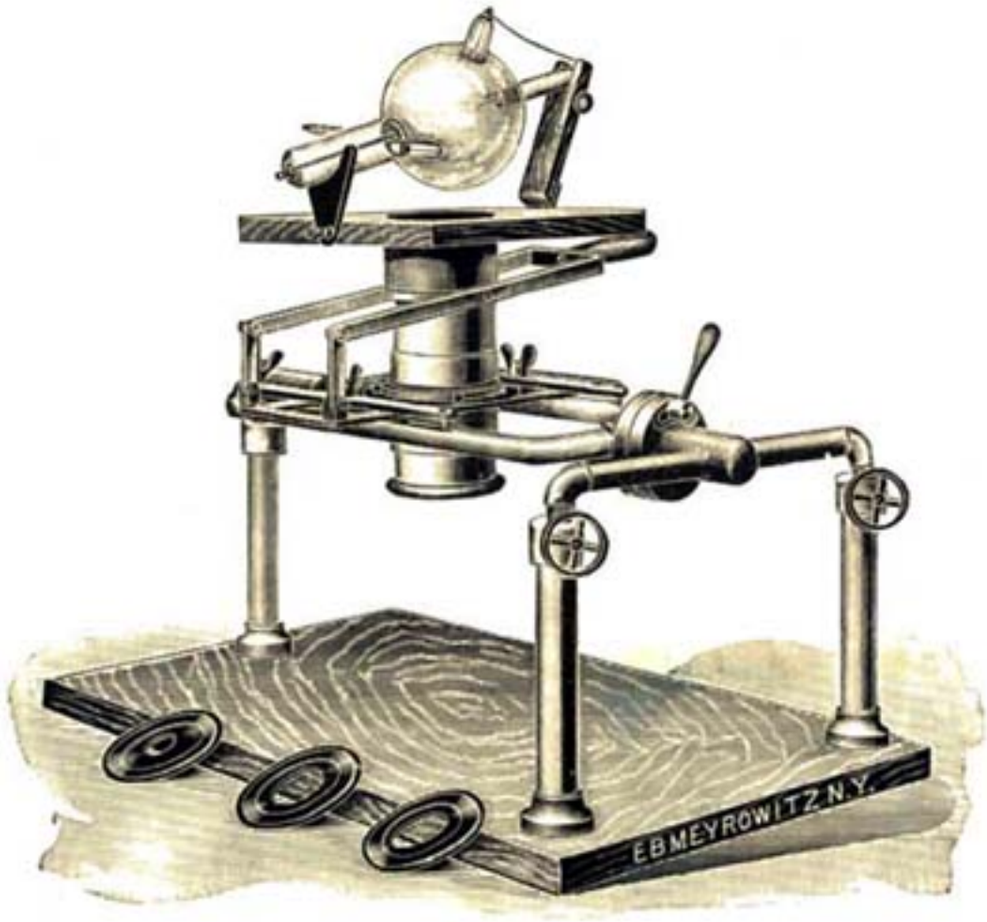
Skiagraphic Table

E 6200

The above cut represents the most convenient and compact form of Skiagraphic table that one can procure. It is arranged with an extension on either end, giving a total length of six feet (6 ft.) when these are raised. Its shortest length when the extensions are lowered is forty-one inches (41 in.); width, twenty-four inches (24 in.).

Price without cushion..... $15.00
" with " 20.00

Compression Blende



E 6300

The compression blende is considered of great importance to the skiagrapher in that better detail can be secured, as with it the secondary rays are cut out and the circulation which has been found to interfere with the results is not only checked, but the part is made anemic by the pressure which is made in adjusting the compression tube. Although a little more time is required for the exposure, the difference in results warrants the additional time.

Price $120.00

X-Ray Plates

We are in a position to furnish X-Ray plates of every make; however, we ordinarily send the Cramer plates when they are not to be enclosed in envelopes. When we are to send them enclosed we furnish the Seed plate.

From our photographic department we can secure for our customers X-Ray plates of either foreign or domestic make, and guarantee to furnish absolutely fresh goods.

TABLE OF PRICES.

Sizes.	Single Coated per doz.	Double Coated per doz.
5" x7"	$1.40	$1.70
5 x8	1.55	1.85
6½x8½	2.10	2.50
7 x10	2.65	3.20
8 x10	3.00	3.60
10 x12	5.15	6.15
11 x14	7.25	8.25
14 x17	11.25	12.45
16 x20	16.40	17.80
17 x20	17.25	18.65
18 x22	20.40	22.35
20 x24	24.65	26.65

Lenses for X-Ray Photographic Reduction Cameras

Reductions made from X-Ray plates form a concise memoranda of experiments and diagnoses, and can be readily made with a suitable enlarging and reducing photographic apparatus. One may make either a bromide reduction or a negative from which any number of pictures can be printed. The necessary apparatus will include the above mentioned camera fitted with a suitable lens, a supply of plates, plate holders, printing frames (see list of photographic apparatus listed in the preceding pages).

We are prepared to supply the entire photographic outfit, and are the sole United States agents for the celebrated Zeiss (Jena) lenses made to suit every branch of photographic art.

Price list and particular information will be gladly furnished on request.

Developing Powders

E 6550

As the Metol-Hydro developer has proven the most satisfactory for X-Ray plates we furnish this combination put up in boxes of six powders each. The compounds are carefully wrapped in non-actinic paraffined papers and not liable to deteriorate.

Price per box.....$.25

We can also furnish other developing powders put up in same form as follows:

Hydrochinon developer,	per	box	of	six	powders		$.25
Eikro-Hydro	"	"	"	"	"	"	.25
Eikonogen	"	"	"	"	"	"	.25
Pyro	"	"	"	"	"	"	.25
Microgen	"	"	"	"	"	"	.25
Amidol	"	"	"	"	"	"	.25

Fixing Salts

Per Pound.

E 6551—Sodium Hypo-Sulphite, chemically pure anhydrous.....$.35

Developing and Fixing Trays

Steel Enameled Trays

E 6650

These trays are made of the very best sheet steel, stamped from one piece and have no seams or joints. They are very light and durable. Are guaranteed to be *acid* and *chemical* proof.

PRICES.

For Plates.	Inside Measure.	
5" x 7"	5½"x 7½"x1½"	$ .50
6½x 8½	7½ x 9⅞ x1⅝	.75
8 x10	8¼ x11 x1¾	1.13
10 x12	11 x13¾ x2	1.70
11 x14	12⅝ x14⅝ x2	2.25
14 x17	15¾ x19¾ x2¼	3.75

Larger sizes to order.

Standard Hard Rubber Trays

E 6700

The Hard Rubber Tray is, no doubt, the best for developing X-Ray plates, as they are absolutely acid and chemical proof. Although they are very durable and not easily broken, they have the advantage of other makes in that they can be repaired if accidentally broken.

5¼"x 7¼"	$ .70	10¾"x12¾"	$1.85
5½ x 8½	.80	12 x16	2.80
7 x 9	.96	15 x19	4.75
8½ x10½	1.25	18 x22	6.00

Larger sizes to order.

Glass Trays

E 6750

These we furnish in four sizes, as follows:

7" x 9"	$ .60
8½ x10½	.75
12½ x14½	3.50
17 x21	12.00

E 6800

Graduates

Especially designed for skiagraphic work. Raised figures and ground graduations.

Price 8 oz.	$ .40
" 16 "	.60
" 32 "	1.25

E 6850

Ribbed Funnels

Best for any work where filter paper is used.

	Plain.	Fluted.
Price 1 pt.	$ .20	$ .20
" 1 qt.	.25	.30
" ½ gal.	.40	.45

Stirring Rods

(Glass)

E 6875

Price 8 inches	$ .05
" 10 "	.10
" 12 "	.15

E 6890

Enameled Pitchers

(Seamless Steel)

We can furnish Agate or Blue and White Enameled Pitchers in any size desired.

Price (enameled) 2 qt.	$1.40
" " 4 "	1.75

Washing Tanks

The Ingento Plate Washer

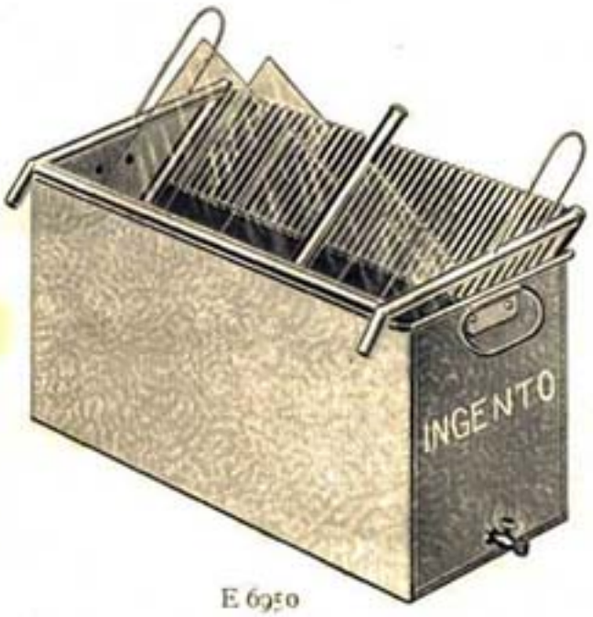
(PATENT APPLIED FOR.)

E 6950

An innovation in professional washing apparatus. Its distinctive features place it at the head of all wash boxes. The Ingento Washing Boxes will, in one operation, wash negatives of any size smaller than the largest size for which they are intended. The cuts fully illustrate the method by which this is accomplished.

It will also be seen that the inside rack is tilted, so that it is impossible for the plates to be disturbed during the operation of washing. The water enters the box through two long tubes, which extend the full length of the box, one on each side. The tubes are perforated with holes every one-half inch so that a stream of water is forced between each plate, thus insuring quick, perfect and uniform washing of each plate.

The inside rack can be lifted up and placed on top of the box so that the plates can be drained and dried as is shown in illustration. The 4 x 5 size is made entirely of zinc, but the larger sizes are made of galvanized iron, and are built extra strong to accommodate the large volume of water and increased weight of plates.



E 6950

PRICES:

No. 1.	For	25	plates	4x5	or	smaller	$1.75
No. 1½.	"	25	"	5x7	"	"	3.75
No. 2.	"	50	"	5x7	"	"	5.00
No. 3.	"	100	"	5x7	"	"	7.50
No. 4.	"	30	"	8x10	"	"	4.50

Larger sizes to order—9 x 12, 11 x 14, 14 x 17.

E 6975

Drying Racks

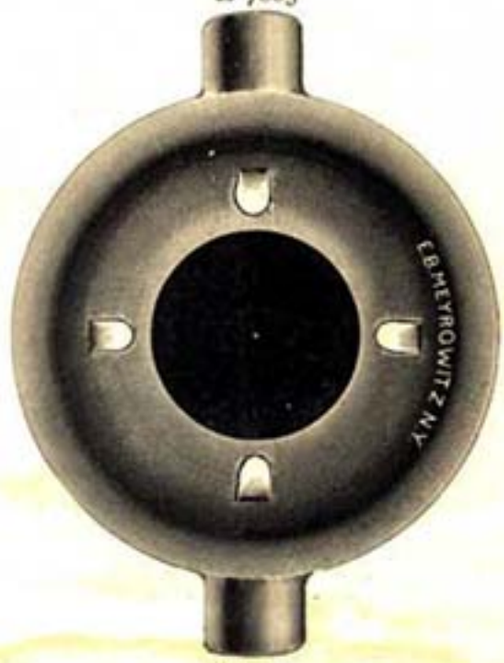
Any size negative can be placed in this rack from lantern slides to plates 14"x17". It is 24" long and will accommodate 48 plates.

Price $1.00

Smaller size to order.

E 7000

E 7005



E 7010

Composition Apron

To protect the body from the effects of the X-Rays, we supply the Composition (lead and rubber) Apron Shields shown in the accompanying cut, which are absolutely opaque to this light. These can be made in full length, with or without sleeves.

Price of Apron as shown in cut, without sleeves $8.50
" " " " " " " with " 15.00

Composition Opaque Gloves

The Gloves as represented by the above illustration are made of an opaque composition of lead and rubber in various sizes. They are very flexible and comfortable, while affording absolute protection to the operator from the effects of X-Rays.

Price per pair..... $5.00

In ordering state size of hand measured around palm.

Composition Shield

Undoubtedly the most practicable and convenient method of protecting both the operator and the patient is the use of our composition shield, as shown in above cuts. The shields are made in all sizes to fit Standard X-Ray tubes, cut so that they can be placed over tube, thus preventing the escape of any of the rays except through the opening provided for this purpose. When cone and cap are removed a four-inch opening is left. On adjusting the cone the diameter of the opening is two inches, and when cap is in place an area of light, one inch in diameter, is allowed to pass.

Price of Shield only..... $10.00
" " Cone and Cap..... 2.00

Always send size of tubes to be fitted.
This material also furnished in the sheet 24 inches wide.
Price on application.

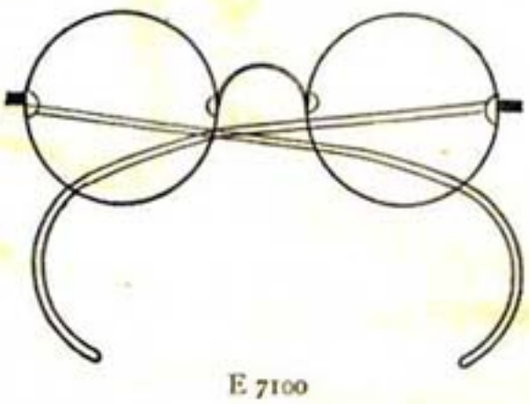
Skiagraphic Name-Plate

E 7050

Metal plates made for numbering X-Ray negatives are not only a convenience, but where skiagraphy is carried on to any extent they are a necessity. We make our numbering plates so that the operator's name can be registered besides the number and series of each negative. With each plate is furnished three sets of numbers and a set of letters up to G.

Price of set complete..... $3.00
In ordering, state initials desired.

Spectacles



E 7100

Our spectacles are made of a special quality of glass and are used by operators to protect the eyes from X-Ray burns. They are an essential part of the X-ray outfit.

Price..... $2.50

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